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JACK-PINE BUDWORM EGG SURVEY ON THE SUPERIOR NF - 1969

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INTRODUCTION

The last major outbreak of jack-pine budworm, Choristoneura pinus pinus Free., occurred in the late 1930's. More than 70,000 cords of merchantable timber were reported killed. Since then, only small outbreaks have been reported. In 1968, budworm defoliation appeared in the northwest part of the Forest and continued in 1969. An annual trend survey is made to observe population fluctuations in order to develop methods for predicting severe outbreaks before damage occurs. This egg survey is part of the trend survey.

METHODS

Seven plots are systematically scattered throughout the jack pine type of the Forest. Each plot is a jack pine stand at least 5 acres in size. Each sample consists of 4,36 inch long branches (2 from mid-crown and 2 from lower-crown) taken from each of 10 dominant/co-dominant trees located in a cluster. The number of tips (current shoots) and the number of egg-masses and the degree of their parasitization was determined by a crew at Toumey Nursery. The average number of eggs per 100 tips was calculated with the assumption that an average egg-mass has 50 eggs. The egg numbers of parasitized egg-masses were reduced in proportion to the parasitization. Populations of more than 50 eggs per 100 tips are considered capable of causing severe damage, provided all budworms survive until pupation.

RESULTS

In general, budworm populations have remained the same as in 1968 (Table I). Only plot 904 shows an increase in egg population. It is expected that some defoliation will occur in the area of the plot. Since similar populations have occurred there in the past, the damage is not expected to be severe.



Table I. The results of 1969 egg survey and population trends since 1967.

Plot No.	Location			Number of eggs per 100 tips		
	T	R	45	1967	1968	1969
901	61	11W	13	35	9	8
902	60	11W	7	70	6	8
903	65	16W	12	70	30	23
904	65	14W	24	98	47	104
908	65	4W	19	70	2	0
909	65	4W	26	34	2	0
910	65	4W	32	1	0	0